

information available to Applicants, this list of claim status does not correspond to that given by the Examiner on the cover page of the Advisory Action mailed on December 27, 2002. Clarification is respectfully requested.

2. Claim rejections under 35 U.S.C. §103

In the Advisory Action dated December 27, 2002, the Examiner has maintained a rejection of claims 1-3, 5-7, 9-22, 24-26, 29-50, 52-72, and 74-78 as being unpatentable over Bansleben et al., U.S. Pat. No. 6,255,248 (hereinafter "Bansleben") in view of Cahill et al., U.S. Pat. No. 6,083,585 (hereinafter "Cahill"). Applicants respectfully traverse this rejection.

Bansleben is directed to compositions comprising (i) a copolymer of at least ethylene and a strained cyclic alkylene, (ii) a transition metal catalyst, and (iii) diluent polymers such as polyethylene terephthalate (PET) or polyvinylidene dichloride (PVDC), among others (col. 3, line 7-col. 4, line 19. The copolymer (i) may further comprise units having pendant cycloalkenyl moieties; an example of such a copolymer is ethylene/cyclopentene/4-vinylcyclohexene (Examples 19-28, Table 2, cols. 13-14). Bansleben also reported a comparative example of ethylene/4-vinylcyclohexene copolymer (Comparative Example 29, col. 13, lines 40-44).

Cahill teaches an oxygen scavenging condensation copolymer comprising polyester segments and polyolefin oligomer segments, produced by condensation between the polyester segments and difunctionally derivatized polyolefin oligomer segments (e.g., diacid, diol, or diamine) (col. 12, lines 17-63). The polyolefin oligomer segments are considered to be oxygen scavenging (col. 10, lines 10-45). Cahill does not discuss cycloalkenyl moieties as oxygen scavengers or blends comprising oxygen barrier polymers.

The references do not teach a blend of (i) an oxygen scavenging polymer comprising a cyclic olefinic pendant group and (ii) an oxygen barrier polymer. To the best of Applicants'

knowledge, the closest teaching provided by the references is of a blend of (i) an ethylene/cyclopentene/vinyl cyclohexene terpolymer and (ii) a diluent polymer, such as PET or PVDC (col. 3, line 44-col. 4, line 19).

The references do not suggest the claimed invention because Bansleben failed to recognize the advantage of reduced oxygen permeability possible for films formed from blends of (i) an oxygen scavenging polymer comprising a cyclic olefinic pendant group and (ii) an oxygen barrier polymer relative to films formed from oxygen barrier polymers alone. Bansleben provided no data reporting oxygen permeability of films formed from oxygen barrier polymers alone, let alone that of films formed from blends of oxygen scavenging polymers and oxygen barrier polymers. Bansleben's teachings focused on oxygen scavenging, instead.

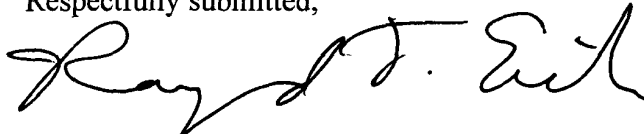
One of ordinary skill in the art would have no basis to expect that films formed from blends of (i) an oxygen scavenging polymer comprising a cyclic olefinic pendant group and (ii) an oxygen barrier polymer would have reduced oxygen permeability relative to films formed from oxygen barrier polymers alone. A film formed from an oxygen barrier polymer has a low oxygen permeability (rate of oxygen flow through the film) because of the microstructure formed by barrier polymer molecules in the film. Removing barrier polymer molecules, all other things being equal, would be expected to increase the permeability. Because most oxygen scavenging polymers have a relatively low scavenging rate (e.g., Bansleben, Tables 3-5), one of ordinary skill in the art would consider it likely that replacing some of the barrier polymer molecules in a film with oxygen scavenging polymer molecules would lead to higher oxygen permeability, with the scavenging polymers being most active in scavenging oxygen after the oxygen had infiltrated the film and entered the package interior.

Applicants tested this hypothesis, as reported at Example 2 and Table 2, pp. 22-23. Surprisingly, a film formed from 80 wt% ethylene/vinyl alcohol (EVOH), 18 wt% EMCM, and 2 wt% cobalt masterbatch with ethylene/methyl acrylate (EMAC) carrier resin (Sample 4) had an oxygen permeability of substantially zero, whereas a film formed from 100 wt% EVOH exhibited oxygen permeability of 4.64 cc/m²-day. This surprising result would not have been expected in light of Bansleben and Cahill, for the reasons discussed above. Therefore, Applicants believe the references do not suggest the claimed invention, and the rejection of claims 1-4, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115 should be withdrawn.

3. Closing remarks

Upon approval of the request for continued examination filed herewith, and entry of this amendment, Applicants believe all pending claims under consideration, viz., claims 1-4, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115, are in condition for allowance. The Examiner is invited to contact the undersigned patent agent by telephone at (713) 934-4065 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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